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Factors contributing to high school dropouts were investigated. IQ and previous grade were examined; 23.8 percent of the dropouts questioned indicated lack of interest as the primary reason for leaving school. Another 13.4 percent indicated parental lack of interest, while 15.3 percent indicated discouragement through course failure. Nine characteristics studied were: sex, education and occupation of father, socioeconomic status of the family, scholastic aptitude, reading level, arithmetic level, years retained, days absent to grade six.

It was found that two periods when dropouts are heaviest are the summer months and January. The largest number of dropouts are sixteen years of age. More boys than girls drop out of school. Scholastic aptitude is lower in the dropout than in the persister. Reasons for dropping out were related to home situations, which were more unfortunate than those of the persister. Occupational classification of the father emerged as a significant factor, as few dropouts came from families where the fathers were classified as professional, sales or service.

Identification of a school dropout as early as his seventh grade year seems possible. Results indicate that he will most likely be a boy of below average intelligence, with reading and math achievement well below average. He will have been retained one or more years and have a poor attendance record. His father will have below an eighth grade education and/or be unemployed, on welfare and/or of unskilled occupation.

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THE KANAWHA COUNTY SCHOOL DROPOUT PROBLEM 1962-63

by

Hugh I. Peck

Director of Guidance, Counseling and Testing

The Public Schools of Kanawha County
Charleston, West Virginia

L. K. Lovenstein
Superintendent

July 1963

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PREFACE

The first step toward the solution of any problem is an analysis of the depth and scope of that problem. This study, it is hoped, is a first step toward a reduction of the number of school dropouts in Kanawha County Public Schools. Research is only effective if it is followed by action. This report we believe is the first step in action research.

No research is done without assistance. A word of praise and thanks must go to the thirty-one Dropout Coordinators in the various schools of the County and Mr. James Smith, Director of Attendance and Co-chairman of the Dropout Study Committee. Mr. James J. Fast of the Division of Statistical Services of the State Department of Education and Mr. Edwin C. Townsend of the West Virginia University Computer Center both gave willing and able assistance. Dr. B. G. Pauley, Associate Superintendent, was my editor, critic and steadfast supporter throughout. Mrs. Jean Lanham and Mrs. Kay Wingrove assisted in the collection and checking of the data. Mrs. Jean Lanham was the excellent typist.

The only answer to the dropout problem is action.

Hugh I. Peck
Director of Guidance,
Counseling and Testing
Charleston, West Virginia
July 12, 1963

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THE KANAWHA COUNTY SCHOOL DROPOUT

In the spring of 1962 the Superintendent of Kanawha County Schools requested that the Director of Attendance and the Director of Guidance, Counseling and Testing plan a detailed study of the school dropout problem in Kanawha County. A Kanawha County Dropout Study Committee was organized, which included a coordinator from each secondary school in the county plus the two directors. The County Study was conducted in cooperation with the West Virginia State Department of Education Withdrawal Survey. Each member of the committee was responsible to report to the Office of Guidance Services the dropouts and transfers from his school each month.

These reports were made on two forms. An International Business Machine Mark-Sense Card was completed on each withdrawal, i.e. each dropout and each transfer. A special Dropout Interview Sheet was completed on each school dropout. A reasonable effort was made to interview each dropout. The Kanawha County Study included a study of the summer dropouts as well as the school year dropouts. The summer dropouts were not a part of the state survey. This study included all secondary schools in Kanawha County.

One of the most confusing things about the study of the school dropout is that of terminology. To some, any student who enters grade one and does not graduate twelve years later is considered a dropout. Many reports are based on these two figures. Such figures do not take into account transfers, retentions, deaths or any other accounting of student mobility. For the purpose of this study the following terminology is used:

1. withdrawal - any student who withdraws from a Kanawha County School for any reason.

2. transfer - any student that changes his school location, these may include transfers into or out of Kanawha County--such uses will be designated.

3. dropout - A Dropout is a pupil who leaves a school, for any reason except death, before graduation or completion of a program of studies and without transferring to another school.

The term "dropout" is used most often to designate those elementary and secondary school pupils who have been in membership during the regular school term and who withdraw from membership before graduating from secondary school (grade 12) or before completing their programs of studies. Such an individual is considered a dropout whether his dropping out occurs during or between regular school terms, whether his dropping out occurs before or after he has passed the compulsory school attendance age, and, where applicable, whether or not he has completed a minimum required amount of school work.

It is felt that this terminology is realistic and generally accepted by researchers on the school dropout. The purpose of the study was to investigate the depth and scope of the school dropout problem in Kanawha County Secondary Schools.

Enrollment and Withdrawal

Table 1 shows enrollments and withdrawals for the secondary schools of Kanawha County beginning with the close of school in June 1962 through the close of school in June 1963.

Table 1

Enrollments 1962 to 1963

Active Enrollment - June 1962	24,665
Graduates - June 1962	2,671
Entering 7th grade - September 1962	5,298
Anticipated Enrollment - September 1962	27,292
Transfers - Summer 1962	351
Dropouts - Summer 1962	241
Active Enrollment - September 1962	26,700

The anticipated enrollment is computed by deducting the number of graduates from and adding the number of incoming seventh graders to, the active enrollment in June 1962. The active enrollment for September 1962 was 592 less than the anticipated enrollment. Two hundred forty-one of these dropped out of school. It is assumed that the remaining 351 transfered out of the county. Since it can also be assumed that students moved into the county during the summer of 1962, the figure 351 is the number of "transfer outs" in excess of the number of "transfer ins". Table 2 shows the number of transfers in and out of Kanawha County Secondary Schools from June 1962 to June 1963.

Table 2

Transfers 1962 to 1963

Summer 1962 - Transfers Out	351
1962-63 School Year - Transfers Out	1,295
Total - Transfers Out	1,646
Out of State - Transfers In	321
From Another W. Va. County - Transfers In	1,283
Total - Transfers In	1,604

Table 2 does not show a significant difference between the number of transfers in and out of Kanawha County. These data plus the fact that the difference between the population of Kanawha County during the 1950 census and the 1960 census was very small would indicate that migration in and out of the county cancel each other and are negligible factors in the dropout study.

Table 3 shows the breakdown of the various categories of transfers as reported in the county withdrawal survey.

Table 3

Types of Transfers

Within County	369
To Another W. Va. County	433
To W. Va. Non-public School	20
To Another State	842
To Adult Education	10
Total Transfers	1,674

It should be noted that not all transfers recorded are a loss of pupils to Kamawha County and that the summer (1962) transfers were not a part of this study. In order to project the expected active enrollment at the close of the 1963 school year we might summarize the data as follows:

Anticipated Enrollment - September 1962		27,292
Transfers from out of State	(Plus)	321
Transfers from another W. Va. County	(Plus)	1,283
Total transfers out of county	(Minus)	1,646
Total Number of Dropouts	(Minus)	1,137
Expected Active Enrollment - June 1963		26,113
Actual Active Enrollment - June 1963		25,831
Unaccounted Loss		282

The unaccounted loss of 282 students represents slightly more than 1% of our gross enrollment. Similar studies in Ohio, Michigan and Los Angeles show an unaccounted loss in total figures of from 1.75 to 2.25% of the enrollment. Ten students who transfered from regular school to adult education are not included in the total summary figures. It is possible that all out-of-county transfers were not reported. Also some students may have indicated that they were transferring within the county and did not enroll in the new school.

Dropouts

Between the close of school in June 1962 and the close of school in June 1963 Kanawha County had 1,137 dropouts. This number represents 4.2 percent of the September 1962 anticipated enrollment and 4.3 percent of the September 1962 active enrollment. This means that four students out of every one hundred in grades seven through twelve dropped out of school during the 1962-63 dropout study. This compares with 8 to 10 out of 100 which are generally reported in various studies throughout the United States. To this extent Kanawha County seems to compare most favorably with national figures. Many dropout studies reported in the literature omit mention of the summer dropout. Should we do this, based on active enrollment in September 1962, the County dropout rate would be 3.4 percent.

Table 4 shows the number of boys and girls that dropped out.

Table 4

Number of Dropouts by Sex

Boys	621
Girls	516
Total	1,137

Significantly more boys than girls dropped out of school during this study. This becomes even more significant if one should discount the 151 girls and 19 boys who dropped out to get married. Then, boys and girls who leave school for all other reasons than marriage would compare in the ratio of 602 to 365 or almost two to one.

Table 5 shows the number of students who dropped out during the summer months and the school year.

Table 5

Number of Dropouts by Summer or School Year

Summer Dropouts	241
School Year Dropouts	896
Total	1,137

It should be noted that about twenty percent of our dropout loss occurs during the summer months when we are unable to counsel or reach these students. Table 6 shows the number of students who dropped out each month of the school year as well as during the summer.

Table 6

Number of Dropouts by Month of Withdrawal

Month	Boy	Girl	Total	Percent of Total
Summer	100	141	241	21.2
September	43	43	86	7.6
October	61	30	91	8.0
November	48	36	84	7.4
December	42	33	75	6.6
January	78	53	131	11.5
February	46	25	71	6.2
March	56	47	103	9.1
April	58	49	107	9.4
May	44	25	69	6.1
Not Ind.	45	34	79	6.9
Total	621	516	1,137	

If one omits the summer the greatest number of dropouts occured during the school month of January. A chi-square test of the significance of differences shows that the actual distribution of dropouts by months is significantly different from chance expectation at the .01 level of confidence. This would conclude that some factors other than chance operate to determine the month of dropping out. A study of the 131 students who quit school in January reveals that only seven left school for "administrative request," see Table 14 page 13. January coincides with the change of the school semester and the issuance of the second report card. It is at this time that the principal may, according to county policy, require a student who has failed two subjects two consecutive nine week periods to withdraw from school for one semester, provided of course, that he is over 16 years old. It is important to note that the month of September, usually reported by other studies as the heaviest dropout month ranks fifth in Kanawha County.

Table 7 presents a study of the school dropouts by age at the time of withdrawal.

Table 7

Number of Dropouts by Age at Time of Withdrawal

Age	Boy	Girl	Total	Percent
12	1	0	1	0.9
13	2	5	7	.6
14	7	19	26	2.3
15	22	44	66	5.8
16	301	268	569	50.0
17	166	118	284	25.0
18	89	44	133	11.7
19	28	15	43	3.8
20	3	3	6	.5
21	2	0	2	.4
Total	621	516	1,137	

Students under sixteen may drop out of school for one of two or three reasons. If a student lives more than two miles from the nearest school or bus stop he cannot be required to attend. Over half of the boy dropouts under sixteen fit this cateogory. Proven destitution at home, a legal excuse, was reported by a small percent of these. Marriage and/or pregnancy is another acceptable reason. A great percent of the girls under sixteen withdrew via this route. Some students under sixteen dropped out of school because of physical or mental incapacity. Half of the dropouts withdrew at sixteen years of age, the earliest legal age a student may withdraw by choice. This would seem to indicate that most dropouts are of the "just wait until I'm sixteen" variety. Some thirty-five percent of the dropouts, however, did continue in school after sixteen for a period of time.

Closely related to the age of school dropouts is the school year during which the students drop out. Table 8 presents a study of dropouts by school year.

Table 8

Number of Dropouts by Grade Enrolled at Time of Withdrawal

Grade	Boy	Girl	Total	Percent
7	43	28	71	6.2
8	93	51	144	12.7
9	131	67	198	17.4
10	177	168	345	30.3
11	110	135	245	21.5
12	67	67	134	11.8
Total	621	516	1,137	

The greatest number of dropouts occurs during the tenth grade. This is the grade during which the average student reaches his sixteenth birthday. Grade eleven and nine rank second and third, respectively.

This finding agrees with most other studies although the Ohio Study reported the eleventh grade as being the highest. One of the most significant factors for predicting dropouts identified in most studies was that the student was over age for the grade in which he was enrolled. This, of course, usually indicates that a student has failed one or more years of school and therefore has repeated a grade or two. Table 9 is an age-grade matrix showing the age and grade at which the dropouts withdrew from school. The numbers to the right of the dark line designate students over age for their own grade. This is approximately fifty-five percent of the total number of dropouts. A student sixteen years of age or older and in the ninth grade or below is surely a potential dropout. Two hundred-ninety six, about one third, dropped out when sixteen and still in junior high school.

Table 9

Number of Dropouts by Grade and Age

Grade	13-	14	15	16	17	18	19	20+
7	6	11	11	40	2	1		
8	2	7	15	110	9	1		
9		3	12	146	33	4		
10		4	25	176	99	35	5	1
11		1	3	88	95	40	15	3
12				9	46	52	23	4
Total	8	26	66	569	284	133	43	8

Another significant factor concerning time of withdrawal or dropping out is presented in Table 10. Table 10 shows the age at time of dropping out and the month the student dropped out.

Table 10

Number of Dropouts by Month and Grade

Month	Grade 7	8	9	10	11	12
Summer	21	17	33	62	61	47
September	2	10	16	28	20	10
October	5	10	13	30	24	9
November	8	15	12	28	14	7
December	5	13	10	25	16	6
January	5	22	20	40	26	18
February	1	7	21	19	17	6
March	3	21	21	29	16	13
April	8	11	20	36	21	11
May	6	10	21	19	11	2
Not Ind.	7	8	11	29	19	5
Total	71	144	198	345	245	134

Two factors are significant in this chart; the large number of tenth and eleventh graders lost during the summer months. The eighty students lost during the ninth and twelfth grade summers seem most significant. Summer losses are counted according to the grade to which the student was assigned for the coming school year. In addition to the summer losses, many students are shown, again, to have dropped out in January, apparently at the end of the first semester.

Table 11 reports the number of years that dropouts were retained in school. If we assume that the number of years retained for the one hundred forty-nine students not reported follow the same distribution as those reported, then 62 percent of the dropouts had been retained during their school career. Present Kanawha County policy permits a student to be retained two years during his elementary years. A student who has spent eight years in the elementary school may be fifteen years old when he reaches junior high school and is "a sure-bet" to drop out.

Table 11

Number of Dropouts by Years Retained in School

Retained	Boys	Girls	Total	Percent
0	140	235	375	33.0
1	193	130	323	28.0
2	141	63	204	18.0
3	63	13	76	6.7
4	8	2	10	.9
Not Ind.	76	73	149	13.1
Total	621	516	1,137	

The scholastic aptitude of the school dropout is generally reported to be a most significant factor in school withdrawal. Scholastic aptitudes for Kanawha County students are reported as intelligence quotients from the Otis Quick-Scoring Test of Mental Ability, administered in grades six and eight. I.Q.'s reported for County dropouts are based on the most recent Otis test for each student. These data are summarized in Table 12.

Table 12

Number of Dropouts by I.Q.'s

I.Q. Range	Boys	Girls	Total	Percent
74-	112	50	162	14.2
75-81	85	53	138	12.1
82-88	115	85	200	17.6
89-95	105	97	202	17.8
96-102	86	115	201	17.7
103-109	56	63	119	10.5
110-116	17	17	34	3.0
117-123	4	6	10	.9
124+	2	2	4	.4
Not Ind.	39	28	67	5.9
Total	621	516	1,137	

26

1670

If we use a generally accepted "rule of thumb", that an I.Q. of 110 or better is necessary for college potential, Kanawha County lost only 48 students of college potential during the period of this study. This is less than five percent of our total number of dropouts. On the other end of the scale five hundred dropouts, or forty-four percent were below the so-called "normal" limit of ninety. One of the major problems facing education today is to find education and opportunity for these boys and girls. Apparently the county has not solved the problem. Five hundred seventy dropouts, or fifty percent, had average or above intelligence.

Educators agree that reading is the skill most needed for success in school. In Table 13 the reading level of school dropouts is reported.

Table 13

Number of Dropouts by Reading Grade Equivalents

Reading	Boys	Girls	Total	Percent
4.0-	88	33	121	10.6
4.1-5.1	115	56	171	15.0
5.2-6.2	77	87	164	14.4
6.3-7.3	95	98	193	17.0
7.4-8.4	68	76	144	12.7
8.5-9.5	32	48	80	7.0
9.6-10.6	14	21	35	3.1
10.7-11.7	7	15	22	1.9
11.8+	3	5	8	.7
Not Ind.	122	77	199	17.5
Total	621	516	1,137	

The reading scores reported are in grade equivalents and represent the reading level of the student at the time of withdrawal. This is based on the student's most recent reading test. If the most recent reading test was taken more than a year previous to dropping out the reporter was asked to estimate and add reading growth in months. Previous data

have shown that the earliest dropouts are in grade seven, yet, if we can assume that only a few of the unreported reading levels were below 7.3 we find that fifty-percent of all dropouts, including all grade levels were reading at 7.3 or below at the time of withdrawal.

Table 14 gives the reasons reported for dropping out of school. These reasons are based on the stated reasons of the student and the best judgement of the reporter. The twenty-three reasons given were those stated on the IBM Mark-Sense Card designed by the State Department of Education. It should be noted that any student could report any number of reasons, i.e. the same dropout may have reported three reasons for leaving. Generally, two reasons were reported for each student. However, in many cases more were given. The percents shown are based on the total number of reasons given by all students rather than the number of dropouts.

Table 14

Reasons Given For Dropping Out

Reasons	Boys	Girls	Total	Percent of Tot. Reas.
1 Entered Employment	29	23	52	2.4
2 To Seek Employment	58	21	79	3.6
3 Entered Military Service	75	1	76	3.5
4 Entered Correctional Inst.	7	0	7	.3
5 Marriage	19	151	170	7.9
6 Student Illness	10	38	48	2.2
7 Student Deceased	2	2	4	.2
8 Lived Too Far From School	12	14	26	1.2
9 Needed at Home	10	24	34	1.6
10 Left Home	9	10	19	.9
11 Home Conflicts	51	60	111	5.1
12 Parents Lack of Interest	157	111	268	12.4
13 Financial Problems	76	77	153	7.1
14 Students Lack of Interest	329	187	516	23.8
15 Failure in Course	222	110	332	15.3

Table 14 (cont.)

Reasons	Boys	Girls	Total	Percent of Tot. Reas.
16 Administrative Request	38	11	49	2.3
17 Student Conflict W/teacher	21	10	31	1.4
18 Disability - Physical	19	20	39	1.8
19 Disability - Mental	45	7	52	2.4
20 Disability - Emotional	10	8	18	.8
21 Disability - Social	4	3	7	.3
22 Not Known	33	26	59	2.7
23 Other	4	10	14	.6
Total	1,240	924	2,164	

Almost one-fourth of the reasons given were "students lack of interest". Half of all reasons given were either "students lack of interest", "parents lack of interest" and "failure in courses". One fourth of all the girls who dropped out of school did so in order to get married although Kanawha County policy will allow married students to attend school. The statement "lack of interest" seems to imply that the curriculum does not fit the needs of these students. Less than two and one half percent of the students who quit school had a job to go to. Reasons which would generally be considered to have their source in the home -- marriage, needed at home, left home, home conflicts, parents lack of interest, financial problems and student's lack of interest -- make up almost three-fourths of the stated reasons, actually 74 percent. Apparently the process of dropping out of school begins in the home.

Part II.

No matching

929 dropouts

Dropouts and Persisters

As a part of the overall dropout study a thorough investigation was made of the dropouts from grade nine through twelve by comparing them with persisters. Persisters were defined as students who continued to be actively enrolled in school throughout the 1962-63 school year. The purpose of this part of the study was to discover characteristics of dropouts which would enable counselors and other school personnel to identify the potential dropout at the beginning of grade seven.

In order to do this the research was designed to study nine characteristics taken from the elementary school record of these students. The control group, persisters, was selected by referring to class record sheets of tests administered in the sixth grade, locating the name of each dropout and using the student immediately below the dropout on the list as a control student. This procedure provided a random sample of the classmates of dropouts and gives as many members of the dropout, experimental group, as there were of the persister, control group.

The nine characteristics selected for the study were:

1. Sex
2. Scholastic aptitude
3. Reading level
4. Arithmetic level
5. Years retained in school
6. Number of days absent in grade six
7. Education of the father
8. Occupation of the father
9. Socio-economic status of the family

The following hypotheses were stated:

1. There is no significant difference between the ratio of boys to girls who drop out of school and the ratio of boys to girls who persist in school.

2. There is no significant difference between the mean mental ability, as measured by group standardized tests, of students who leave school prior to graduation and those who persist.

3. There is no significant difference between the mean reading achievement score, as measured by group standardized test, of dropouts and persisters.

4. There is no significant difference between the mean arithmetic achievement scores, as measured by group standardized achievement tests, of dropouts and persisters.

5. There is no significant difference between the record of grade failures among school dropouts and persisters.

6. There is no significant difference between the records of absences from school among dropouts and persisters.

7. There is no significant difference between the educational attainment of the fathers of school dropouts and the fathers of persisters.

8. There is no significant difference between the occupational classifications of the fathers of dropouts and the fathers of persisters.

9. There is no significant difference between the socio-economic status of the families of dropouts and the families of persisters.

Data on both the experimental and the control groups were collected from the permanent record cards of the students and punched into IBM cards. A computer was used to make the following analyses:

1. Hypothesis number one was tested by chi-square test for significant differences. The distributions of dropouts and persisters were computed on the basis of sex in order to test this hypothesis.

2. Mental ability scores based on the Otis I.Q. were averaged for both the experimental and control groups. The standard deviations for each group were computed. These data were tested for significance of differences by an analysis of population variance.

3. Hypotheses number three and four were tested for significance of differences by an analysis of population variances. The mean reading and arithmetic achievement scores, and the standard deviations of these scores, for both the control and experimental groups were computed. Significances of differences found from chance variation was tested.

4. Hypothesis number five was tested by obtaining the number of dropouts who had been retained one, two or three years during their elementary school career. Similar data were computed for the control group and the chi-square test was applied to the distributions obtained.

5. The mean number of days absent in grade six was computed for students in both the experimental and control groups. To test hypothesis number six, these data were tested for significance of difference by an analysis of population variance.

6. The mean grade attained in school by the fathers of both the control and experimental groups and standard deviations for each distribution were computed. To test hypothesis number seven, these were tested for significance of difference by an analysis of population variance.

7. The control and experimental groups were compared on the basis of the occupational classifications of their fathers.

The seven classifications used in the Dictionary of Occupational Titles were used as the basis for the comparison. Two additional classifications were added, one for fathers who were unemployed and another for fathers who were receiving some type of welfare compensation. To test the eighth hypothesis, this distribution was tested by chi-square test for significance of difference.

8. The number of families of both dropouts and persisters in each of three socio-economic statuses was determined. Home conditions rated as excellent, very good or above average were rated as 1; home conditions rated as fair, good, average or acceptable were rated as 2; and home conditions rated as poor, very poor or unacceptable were rated as 3. The socio-economic status of the family was determined by the use of the "Home Condition" section of the permanent record card. These two distributions were tested for significance of difference by the chi-square test.

Totals for both dropouts and persisters in each section show the number of students that were included in each section of the study. All students on whom data were available were included. The results are as follows:

Sex

Table 15 reports the distribution of dropouts and persisters by sex. There may be some cause to question these data. Class record sheets in some schools were listed by boys and girls separately. Therefore, the selection of persisters in some instances were determined by the sex of the dropout.

Table 15

Sex of Dropouts and Persisters

	No. Male	% Male	No. Female	% Female	Total
Dropout	488	52.6	441	47.4	929*
Persister	448	48.2	481	51.8	929

A test of significance of difference shows a chi-square of 5.627 which is significant at the .02 level of confidence. It can, therefore, be concluded that a significantly greater number of boys than girls drop out of school in grades nine through twelve. This, incidentally, agrees with the findings in Table 4 of part one. Hypothesis number one was, therefore, not accepted.

Scholastic Aptitude

The means and standard deviations of the scores of the Otis Mental Abilities Test, administered in grade six, are reported in Table 16. I.Q.'s were available for 893 dropouts and 928 persisters.

Table 16

Means and Standard Deviations of I.Q.'s for Dropouts and Persisters

	Number	Mean	σ
Dropouts	893	90.090	12.878
Persisters	923	104.084	8.001

An analysis of variance for the data presented in Table 16 yields an F value of 612.925. A test for the significance of difference between the means yield a t value of 24.753. Such values are significant

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* The total of 929 dropouts from grades nine to twelve does not agree with the total of 922 shown on Table 8 because of seven students who entered correctional institutions, as shown in Table 14.

at the .001 level of confidence. The differences between the means of the scholastic aptitude scores and the variability of the scores for dropouts and persisters cannot be attributed to chance. There is, therefore, a significant difference between the mean scholastic aptitude, as measured by Otis I.Q. tests, of dropouts and persisters, as they were defined in the study. Hypothesis number two was not accepted.[1]

Reading Level

Table 17 shows the mean and standard deviation of the reading levels of dropouts and persisters. Reading levels, it will be recalled, are based on the average grade equivalent of the Word Meaning and Paragraph Meaning subtests of the Stanford Achievement Test Battery administered to dropouts and persisters when they were in grade six.

Table 17

Means and Standard Deviations of Reading Levels of Dropouts and Persisters

	Number	Mean	σ
Dropouts	832	5.1	1.5
Persisters	929	6.3	1.2

An analysis of variance for the data presented in Table 17 yields an F value of 224.947. A test for the significance of difference between the means yields a t value of 14.997. Such values are significant at the .001 level of confidence. The differences between the mean reading grade equivalents and the variability of the reading grade equivalents for dropouts and persisters cannot be attributed to chance. The mean

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[1] The procedure for the analysis of variance and the computation of F and t for hypotheses number 2,3,4,6 and 7 are based on Statistics in Psychology and Education by Henry E. Garrett. The procedure is explained in Chapter 11, page 281.

reading level, based on Stanford Achievement Test, of dropouts is significantly lower than the mean reading level of persisters. Hypothesis number three was, therefore, rejected.

Arithmetic Level

Table 18 shows the mean and standard deviation of the arithmetic levels of dropouts and persisters. The arithmetic level, it will be recalled, is the average grade equivalent of the Arithmetic Reasoning and Arithmetic Computation tests of the Stanford Achievement Test Battery.

Table 18

Means and Standard Deviations of Arithmetic Levels of Dropouts and Persisters

	Number	Mean	σ
Dropouts	829	5.0	1.2
Persisters	929	5.7	.8

An analysis of variance for the data presented in Table 18 yields an F value of 154.342. A test for the significance of difference between the means yields a t value of 12.422. Such values are significant at the .001 level of confidence. Thus, the difference between the mean arithmetic grade equivalents and the variability of the arithmetic grade equivalents for dropouts and persisters cannot be attributed to chance. The mean arithmetic level of dropouts, based on the Stanford Achievement Test, is significantly lower than the arithmetic level of persisters. Therefore, hypothesis number four was not accepted.

Retentions

Table 19 shows the number of years retained for both dropouts and persisters. The years retained are in elementary school, grades

one through six, only. A student who had repeated grades one and three would be retained two years, i.e. the report refers to the number of years retained, not grades repeated.

Table 19

Dropouts and Persisters by Years Retained

	Years Retained								
	0		1		2		3		
	No.	%	No.	%	No.	%	No.	%	Total
Dropouts	443	53	297	34	105	12	2	.2	860
Persisters	774	83	134	14	17	2	1	.1	929

A chi-square of 224.122 was found for the data presented in Table 19. Such a chi-square is significant at the .001 level of confidence. Further, only two members of the persister group who were seniors this year, 1962-63, had been retained two times, none more than twice. Retention is a most significant factor in the study of school dropouts. Hypothesis number five was, therefore, not accepted.

Attendance Record

The attendance record of dropouts and persisters was based on the number of days the students were absent during their sixth year of school. These data are reported in Table 20.

Table 20

Means and Standard Deviations of Number of Days Absent in Grade Six for Dropouts and Persisters

	Number	Mean	0
Dropouts	852	9.2	9.0
Persisters	929	6.0	5.0

An analysis of population variance for the data presanted in Table 20 produces an F value of 84.698. A test for the significance of difference between the means yields a t value of 9.203. Such values are significant at the .001 level of confidence. The difference between the mean number of days absent and the variability of the number of days absent for dropouts and persisters cannot be attributed to chance. The mean number of days absent for dropouts in grade six is significantly greater than the mean number of days absent for persisters. Hypothesis number six was, therefore, not accepted.

Education of the Father

The education of the father was defined as the number of years of formal education the father had attained. A high school education was given a rating of 12, a bachelor's degree as 16, a masters as 18 and a doctorate as 20. The education of the fathers of dropouts and persisters is presented in Table 21.

Table 21

Mean and Standard Deviation of the Educational Attainment of the Fathers of Dropouts and Persisters

	Number	Mean Education Level	σ
Fathers of Dropouts	877	9.09	6.1
Fathers of Persisters	927	11.27	4.0

An analysis of variance of the data shown in Table 21 yields an F value of 62.585. A test for the significance of difference between the means yield a t value of 7.911. Such values are significant at the .001 level of confidence. The difference between the mean educational attainment of the fathers and the variability of the educational attainment of the fathers of dropouts and persisters cannot be attributed to

chance. The educational attainment, i.e. years completed in school, of the fathers of dropouts is significantly lower than the educational attainment of the fathers of persisters. The variability of the educational attainment of the fathers of dropouts show a wider distribution than does that of the fathers of persisters. Hypothesis number seven was therefore, not accepted.

Occupation of the Father

Table 22 shows the occupational classifications of the fathers of dropouts and persisters. Fathers classified as "unemployed" were those not working and not known to be receiving some type of welfare aid. Fathers classified as "welfare" included those who were receiving some type of welfare check or other aid for their livelihood. These indications were taken from the permanent record card and were generally shown by the word "welfare".

Table 22

Occupational Classifications of Fathers of Dropouts and Persisters

	Dropouts		Persisters	
	No.	%	No.	%
1 Professional	31	3.7	116	12.6
2 Sales	31	3.7	61	6.7
3 Service	96	11.4	112	12.2
4 Agriculture, Forestry & Fishery	7	.8	7	.8
5 Skilled	375	44.7	456	49.7
6 Semiskilled	56	6.7	44	4.8
7 Unskilled	59	7.1	45	4.9
8 Unemployed	72	8.6	19	2.1
9 Welfare	111	13.3	57	6.2
Total	838		917	

Almost twice as many fathers of dropouts were receiving some type of welfare aid as were fathers of persisters. Nearly four times as many fathers of dropouts were unemployed as were fathers of persisters.

On the other hand almost four times as many fathers of persisters were professional men than were fathers of dropouts. This distribution yields a chi-square of 117.006 which is significant at the .001 level of confidence. There is a significant difference between the occupational classification of fathers of dropouts and persisters. Therefore, hypothesis number seven was not accepted.

Socio-Economic Status of the Family

The data shown in Table 23, regarding the socio-economic status of the families of dropouts and persisters, were tested by chi-square test of significance of difference. It will be recalled that the socio-economic status of the family was determined by ratings given in the "Home Conditions" section of the Kanawha County Permanent record card.

Table 23

Dropouts and Persisters by Socio-Economic Status of Family

	Dropouts		Persisters	
	No.	%	No.	%
1. Excellent, Very Good or Above Average	9	1.0	147	15.9
2. Fair, Good, Average or Acceptable	572	65.5	712	76.9
3. Poor, Very Poor, Below Average or Unacceptable	291	33.5	65	7.1
Total	872		926	

Although only nine students who dropped out were from homes with conditions rated as excellent, very good or above average; sixty-five students from homes with conditions rated as poor, very poor, below average or unacceptable did persist in school through 1962-63 school

year. A chi-square test of this distribution yields a value of 281.580. Such a value is significant at the .001 level of confidence. Thus, home conditions of potential dropouts are rated significantly lower by teachers on permanent record cards than home conditions of persisters. Hypothesis number nine was, therefore, not accepted.

Conclusions

The following conclusions are stated as a result of the Kanawha County School Dropout Study:

1. Although the school dropout in the county is neither as great as in other parts of the nation nor so severe as has been reported, four out of every one hundred students drop out of secondary school in Kanawha County.
2.. Two periods, the summer months and the month of January, are the periods most favored for dropping out of school.
3. The largest number of dropouts are sixteen years of age. Ages seventeen and eighteen rank second and third respectively. The largest number of dropouts are from grade ten. Grades eleven and nine rank second and third respectively.
4. A greater number of boys than girls drop out of school in the county. Should one discount marriage as a reason for dropping out, the ratio of boys to girls is almost two to one.
5. The most significant factor in the school dropout problem in Kanawha County appears to be that of retention. Since a great many factors are involved in retention a cause and effect relationship does not necessarily exist. Retention involves over age for grade, inability to read, possible rejection by peers and a feeling

of failure. Many times student retentions are closely tied to conditions at home, particularly the lack of interest and encouragement from the parents. Nevertheless, over 62 percent of the dropouts had been retained one or more years in their school career. The second part of the study showed that only two out of every 1000 students who were retained two years stayed in to graduate. A student who had been retained more than two years had almost no chance of graduation. Previous studies have shown that about sixteen percent of our first grade students are retained. Under the conditions of this study the retained student became the dropout.

6. Scholastic aptitude, as measured by Otis Mental Ability Tests, of the school dropout is significantly lower than that of the persister. Forty-five percent of the dropouts had I.Q.'s below 90. The problem facing education of what to do with the "lost group", I.Q.'s 75 to 90, is far from a solution. On the other hand the county lost only 48 students via the dropout route who would generally be considered to have college potential. This compares most favorably with the national picture.

7. Both reading and arithmetic achievement levels of school dropouts are significantly below that of students who stay in school.

8. Reasons for dropping out that were related to the home situation were given far more frequently by dropouts than reasons relating to the school situation. Home conditions of dropouts, as judged by their teachers, were significantly poorer than the home conditions of persisters.

9. The attendance record of the school dropout was significantly poorer than the attendance record of the persister. Poor attendance is often a first sign toward dropping out.

10. The level of educational attainment of the father is a significant factor in identifying potential dropouts. This study indicates that the more education the father has the less likely the student is to drop out of school.

11. The occupational classification of the father is also a significant factor. Very few dropouts are from families where the fathers are classified as professional, sales, or service on the occupational scale.

12. The identification of the school dropout as early as grade seven seems possible. The following characteristics are listed to assist school personnel in identifying the school dropout.

a. Sex -- He will most likely be a boy.

b. I.Q. -- Generally it will be below average. Look for other factors, however.

c. Reading level -- Reading achievement will be low, often one and one-half to two years behind.

d. Arithmetic level -- Arithmetic achievement will be low for age and grade.

e. Retention record -- Retained one year, likely; two or more years, a "sure bet".

f. Attendance record -- Generally poor and erratic.

g. Education of the father -- Generally eighth grade and below.

h. Occupation of the father -- Unemployed, welfare aid, and/or unskilled occupations points to likely dropouts.

i. Socio-economic status -- Many dropouts come from "average" home conditions. Poor home conditions are a strong indicator.

Recommendations

The following recommendations are made to the Superintendent of Schools and his staff. These recommendations are based not only on the evidence presented here, but also on the experience of the writer and the reports of many other dropout studies made throughout the nation.

1. The guidance and counseling program should continue, as rapidly as feasible, its expansion into County junior high schools. Data show these three years as being crucial for the potential dropout.

2. The employment period of County Guidance Counselors should be extended to 210 days. This will provide two weeks before and after the regular school year that the school counselor will be available for work with the potential dropout. The approximate cost of this would be from twelve to thirteen thousand dollars. The value to the students of Kanawha County could never be counted in dollars and cents, particularly the value to the potential dropout. These two additional weeks should be devoted to working with the potential dropout. Actual summer home contacts with the identified potential dropout are recommended. Past experience has shown this to be a most effective technique. The crucial transition period from junior to senior high school for the potential dropout needs to be filled by some show of school interest, especially, during the summer months.

3. The counselors should prepare, and keep up to date, as confidential information, a list of all students identified as potential dropouts. As a result of this overall dropout study, counselors

and other school personnel are provided with guidelines for identifying potential dropouts as early as grade seven. Counselors should make an extra effort to reach these students. Care should be taken to see that the best available school program is planned for them.

4. A re-study should be made of the county retention policy. Further studies should be made to investigate the cause and effect relationship between retention and dropping out. Indications are that a student who is retained one year has a seventy-five to eighty percent chance of being a dropout. A student who has repeated two grades had a ninety-five to ninety-nine percent chance of dropping out before graduation.

5. The three-track grouping plan practiced in most junior and senior high schools should be continued and expanded to all secondary schools. Since most of the students who drop out are of lesser scholastic aptitude, work must be presented that is within their grasp and meaningful to them. The citizenship grade that is planned for secondary schools next year should provide these students an opportunity to show some evidence of school success as citizens regardless of scholastic ability.

6. Special reading programs, remedial and corrective, for junior and senior high students should be considered. If such programs are available, possibly it should cut down on the number of drop-outs. Success in school is very closely tied to success in reading. Success in school is a prime factor in preventing dropouts.

7. The programs of vocational education should continue to be expanded. Personnel involved in the selection of the vocational

student must consider the potential dropout, present selection policy will not provide for students with lower ability.

8. A re-study should be made of the school and county testing program in an attempt to eliminate standardized testing during this month of January, since testing can consume so much of the counselor's time. January should be a month for counseling potential dropouts. Counselors should plan for this in their yearly schedule.

9. Kanawha County Schools should continue its close cooperation with the Charleston Youth Community. This study project will, in all probability, become a demonstration project for the youth of Kanawha County. Emphasis will be on the potential delinquent and the potential dropout. Many plans formulated could be cooperative between the school and the C.Y.C.

10. Kanawha County should not only continue its dropout study for the coming years, but also, begin a study of student mobility. This might be done with the aid of the Univac equipment soon to be installed. The mobility study should include grades one through twelve and consider not only dropouts and transfers but also withdrawals from and transfers into Kanawha County.

11. The State-County Withdrawal Survey for the 1963-64 school year should be preceded by intensive in-service training for members of the Kanawha County School System who will act as dropout coordinators in the schools. This training should result in a smaller number of unreported data and should increase the total accuracy of the accounting procedure.

HIP/sjl
July, 1963

MEMBERS OF THE KANAWHA COUNTY DROPOUT STUDY COMMITTEE

Mr. R. C. Sidebottom
Adams Jr. High School

Mr. Sam Inghram
Cedar Grove High School

Mr. Chester Derrick
Charleston High School

Mr. Leon Soulsby
Chelyan Jr. High School

Miss Girtha Engle
Clendenin High School

Miss Billie J. Davis
Dunbar Jr. High School

Mr. A. J. Tourney
Dunbar High School

Miss Nancy Trotter
DuPont Jr. High School

Mrs. Violet Campbell
Mr. Robert Smith
DuPont High School

Mrs. Doris Gillispie
Mr. Carl Holland
East Bank High School

Mr. A. Mason Mann
Elkview High School

Mr. Arned Brown
Horace Mann Jr. High School

Mr. Buddy Harvey
Leewood Jr. High School

Miss Eugenia Westfall
Lincoln Jr. High School

Mrs. Mary Thornton
Marmet Jr. High School

Mr. Frank Black
McKinley Jr. High School

Mrs. Vivian Martin
Nitro Jr. High School

Mrs. Margaret Wilmoth
Nitro High School

Mr. Bill Hall
Pratt Jr. High School

Mr. H. Clay Martin
Roosevelt Jr. High School

Miss Mary Moore
St. Albans Jr. High School

Mr. John Farley
St. Albans High School

Miss Beatrice Caputo
Sissonville High School

Mr. M. S. McIlwain
So. Charleston Jr. High School

Mr. Luther Hutton
So. Charleston High School

Mr. George Lancainese
Spring Hill Jr. High School

Mrs. Jean Bourne
Mr. Thomas Blake
Stonewall Jackson High School

Mr. Ernest Husson
Thomas Jefferson Jr. High School

Mr. B. F. Hill
Washington High School

Mr. George Cubbon
Woodrow Wilson Jr. High School

Mr. Hugh I. Peck
Co-Chairman

Mr. James Smith
Co-Chairman

DROP-OUT INTERVIEW SHEET

School_____
Grade_____
Date of Withdrawal_____

Name_____ Birthdate_____
Month Day Year
Address_____ Sex____ Race_____

Father's/Guardian's Name_____
Address (if different)_____ Last grade completed____
Occupation_____

Mother's/Guardian's Name_____
Address (if different)_____ Last grade completed____
Occupation_____

Siblings_____ _____ Total Number at Home_____
No. Brothers No. Sisters

Most Recent Test Scores: Name Date Given

Mental Ability
Arith. Ach't.
Reading Ach't.

Grades Repeated_____

Subjects Passing at Withdrawal_____

Subjects Failing at Withdrawal_____

Extra-Curricular Activities_____
_____

Reason for leaving as stated by student_____
_____

Reason for leaving as stated by school_____
_____

Students stated plans for after leaving_____
_____

Attendance Record (Past Year) ____Days Present (This Year) ____Days Present
____Days Absent ____Days Absent

Attendance Problem: Yes____ No____

Related Information_____
_____
_____
_____
_____
(Use back if necessary

HIP/sjl
August 29, 1962

SCHOOL NUMBER 3945602 | SCHOOL NAME MIDWAY JR HS | STUDENT NAME 1

W. VA. DEPT. OF EDUCATION DROP OUT SURVEY

3 AGE

2 SEX ○M ○F

GRADE 4

MONTH DROPPED: JAN · FEB · MAR · APR · MAY · SUMMER · SEP · OCT · NOV · DEC

5 REASON FOR STUDENT DROPPING OUT OF SCHOOL

- ○1 ENTERED EMPLOYMENT
- ○2 TO SEEK EMPLOYMENT
- ○3 ENTERED MILITARY SERVICE
- ○4 ENTERED CORRECTIONAL INSTITUTION
- ○5 MARRIAGE
- ○6 STUDENT'S ILLNESS
- ○7 STUDENT DECEASED
- ○8 LIVED TOO FAR FROM SCHOOL
- ○9 NEEDED AT HOME
- ○10 LEFT HOME
- ○11 HOME CONFLICTS
- ○12 PARENTS LACK OF INTEREST
- ○13 FINANCIAL PROBLEMS
- ○14 STUDENT'S LACK OF INTEREST
- ○15 FAILURE IN COURSE
- ○16 ADMINISTRATIVE REQUEST OR DISMISSAL
- ○17 STUDENT CONFLICT WITH TEACHER
- ○18 DISABILITY - PHYSICAL
- ○19 DISABILITY - MENTAL
- ○20 DISABILITY - EMOTIONAL
- ○21 DISABILITY - SOCIAL
- ○22 NOT KNOWN
- ○23 OTHER _____

TRANSFERS

- ○24 WITHIN COUNTY
- ○25 TO ANOTHER W.VA. COUNTY
- ○26 TO W.VA. NON PUBLIC SCHOOL
- ○27 TO SCHOOL OUT OF STATE
- ○28 ADULT EDUCATION PROGRAM

COMMENTS: _____

SIGNED _____ DATE _____

7 IQ	8 READING LEVEL	9 NO. OF SCHOOL YEARS RETAINED
		○0
○ ○	○ ○	○1
74-	40-	
○ ○	○ ○	○2
75-81	41-51	
○ ○	○ ○	○3
82-88	52-62	
○ ○	○ ○	○4
89-95	63-73	
○ ○	○ ○	○5
96-102	74-84	
○ ○	○ ○	○6
103-109	85-95	
○ ○	○ ○	○7
110-116	96-106	
○ ○	○ ○	○8
117-123	107-117	
○ ○	○ ○	○9
124+	118+	

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